



INTERVIEW WITH GEN JOHN M. KEANE ARMY VICE CHIEF OF STAFF

Q. The Army Chief of Staff has articulated a vision for transforming the Army into a force that is responsive and dominant at every point on the spectrum of operations. What do you consider to be the three most important aspects of this momentous task?

A. There are three primary components to the Army vision: people, readiness, and transformation. Simply put, the Army vision is about remaining the most respected Army in the world and the most feared ground force to those who would threaten the interests of the United States. People are the most important because the Army *is* people. Our Army must continue to attract, train, motivate, and retain high-quality people to fill the ranks of this magnificent institution. Only then, through

Simply put, the Army vision is about remaining the most respected Army in the world and the most feared ground force to those who would threaten the interests of the United States.

a position of strength, can we remain ready to meet today's challenges while undergoing an extraordinary transformation that touches every fabric of our Army.

Readiness remains the Army's top operational priority, and we will never lose the faith and confidence of the American people to fight and win the Nation's wars. We are regarded as the pre-eminent land force in the world—a position we are committed to maintaining.

Transformation is truly about how we intend to change the way we fight this Army, and of course, how our doctrine, training, logistics, acquisition, and leader development will reflect this change. The tremendous growth and explosion of information technologies will provide us with unprecedented situational awareness that will serve as the catalyst for changing the way the Army fought for most of the 20th century. In the final analysis, our Army will become more strategically respon-

Our Army must continue to attract, train, motivate, and retain high-quality people to fill the ranks of this magnificent institution.

sive and dominant across the full spectrum of operations.

Q. What is your primary role in the transformation effort?

A. First, the title that truly captures the duties of the Vice Chief is Chief Operating Officer of the Army. I am involved in futures, yet the TRADOC [Training and Doctrine Command] Commander is the futures architect. The Vice Chief has to run the daily operations of the Army—its resourcing, training, preparation, engagement, and deployments. Transformation is deeply embedded in each of these responsibilities, and it is my job to ensure that the Army Staff is synchronized in its support of our transformation efforts.

Q. Some critics have questioned whether the Army should be transforming itself rather than leaving that task to an outside body. What is your response to this?

A. I think it is very important to remember that the Army is not undergoing transformation in isolation. We are part of the joint team, and we have been working closely with the Department of Defense and our sister Services on this effort. We have kept the administration and Congress fully informed and, I might add, there is a great deal of support for where the Army is headed. There

are always going to be pundits who say the Army should not be in charge of transforming itself, but one should remember that the Army has great depth of experience in this area. Prior to World War I, for example, we were a 210,000-man frontier Army—not a single division existed. As the war proceeded, the Army grew to its peak strength of nearly 4 million troops and organized a staggering 62 divisions, 43 of which were sent overseas. We entered the war with 57 military occupational specialties. In January 1919, we had 703. That is change, and our history is rich with many other extraordinary examples of transformation. Now, the Chief has embarked on another bold transformation—one that is going to fundamentally alter how we do business and position the Army for the likely threats and challenges of the 21st Century.

Q. One of the primary goals of the transformation is to reduce the “logistics footprint.” What does this mean, and how will the Army achieve it?

A. By “reducing the logistics footprint,” we mean eliminating or reducing unnecessary sustainment-oriented equipment, supplies, personnel (including contractors and civilians), and infrastructure within the combat zone while maintaining or improving the sustainment mission. We will achieve this goal through both a physical and cultural change. We must overcome an institutional culture to “take it all, just in case.” Our Army, as a whole, must overcome the “iron-mountain” approach to supply and sustainment logistics. We no longer have the assets for this approach, nor can we, from a resource perspective, afford it. We must balance the competing demands on scarce strategic and tactical lift platforms. We must focus our energy on doing things smarter, faster, and with fewer resources.

Equally important is the need to reduce the demand for sustainment stocks by leveraging technology to

cut back on fuel, water, repair parts, and ammunition requirements. These account for 90 percent of the daily requirements for a deployed heavy force. We believe we can make substantial reductions in these key stocks. We can reduce our demand for fuel by decreasing fuel consumption, but we can also leverage the use of alternative fuels. We can develop and employ hybrid systems, which can produce power without the need for generators. Additionally, we can incorporate advanced propulsion technologies into our Future Combat Systems. Technology exists today to convert vehicle exhaust to water, but the equipment is too large and bulky. We must continue to investigate this area to reduce our transportation requirements for water distribution.

We can reduce our demand for repair parts by leveraging both existing and future technologies. We should continue to insist that manufacturers design equipment that maximizes existing common repair parts. Fielding a mobile-parts hospital will give commanders the ability to manufacture their own parts near the combat zone. Advanced materials will improve reliability and reduce the mean-time-between-failure rate. Additionally, by developing “intelligent” vehicles that will tell an operator when a part is about to fail, logisticians can ensure the part is available prior to the actual failure. Ammunition requirements can be

Emerging technologies and our application of them can be leveraged to reduce the logistics footprint to ensure flexibility and mobility for the combat commander.

The days of a stovepipe approach to doing business and supporting the soldier are gone. We have changed our acquisition and business strategies to emphasize system life-cycle management, from development to sustainment to disposal.

dramatically reduced through investment in smart and brilliant munitions. Munitions that can find, identify, and maneuver to destroy targets will significantly limit the number of rounds required per target.

Finally, our ability to reduce our footprint is dependent on our ability to provide focused logistics. We have set a stretch goal to reduce the logistics footprint by 50 percent. To that end, the ability to communicate what is needed and where is critical. A solid communications backbone combined with automated logistics systems will provide the logistician the key information required to support the warfighter. As such, we are evolving from a stovepiped, manual process to a Web-based, wireless system. We are currently engaged in a wholesale logistics modernization program. We are developing a seamless, integrated information and management system that will more fully integrate wholesale and retail supply operations. Emerging technologies and our application of them can be leveraged to reduce the logistics footprint to ensure flexibility and mobility for the combat commander.

Q. What are your thoughts relative to the Army's progress in merging some of the efforts of the acquisition and logistics communities?

A. We are making some progress

in this area. Our acquisition and logistics communities are a big part of our development of an integrated business environment. The days of a stovepipe approach to doing business and supporting the soldier are gone. We have changed our acquisition and business strategies to emphasize system life-cycle management, from development to sustainment to disposal. Now, our acquisition and logistics experts work on integrated process teams to solve problems together and to make sure that what we buy we buy smart and that we consider our total ownership costs, not just the immediate contract costs. Increased logistics involvement in the development phase of the life cycle helps ensure the acquisition community includes such issues as supportability and maintenance in the acquisition strategy. Continued and early involvement of the acquisition community in long-term logistics sustainment issues results in buying replacement parts that modernize the system rather than just maintain it. At several of our commands, acquisition and logistics personnel are collocated, bringing a real multifunctional perspective to our business issues and to our total life-cycle emphasis. We have garnered savings and better products by integrating the efforts of our acquisition and logistics commu-

nities. We are operating in a multifunctional environment, and we continue striving to use and maximize the efforts of all our people and their expertise. This is the most efficient and effective way to do our business and ensure improved product affordability, sustainability, and readiness.

Though we have made significant strides in merging some of our efforts, we do not have processes that connect end-to-end. There is still some work to be done. We need laboratories to focus more on reliability and new concepts of support early and continuously throughout a program's life. We need life-cycle models that allow us to make design trades during concept and early development. These models will also allow assessment of life-cycle costs including training and people—not just capability. We need to bring on a new young workforce to challenge our old ways of doing business. We need to change our financial system to provide incentives for availability, not parts. We need to move to a “system-of-systems” focus and define the payoff for commonality. Finally, we need to come to judgment on how much depot/arsenal is needed and make it effective and productive. The key is the right mix of people, processes, and equipment.

Q. The science and technology and acquisition communities have been challenged to field the Future Combat Systems [FCS] during this decade. What special steps are necessary to achieve this accelerated schedule, and what are some of the key technology efforts and their potential payoff?

A. To achieve the planned Future Combat Systems [FCS] accelerated schedule, it is essential that the Army maintain continuous senior leadership involvement and focused competition among our industry teams. We intend to establish initial capabilities early, consistent with mature

technologies, and enhance those capabilities through parallel S&T development and insertion in subsequent block upgrades. Furthermore, we will make extensive use of Simulation and Modeling for Acquisition, Requirements and Training [SMART] throughout the FCS Program to help define requirements, conduct detailed design, perform system integration, demonstrate performance, and optimize testing. We will also execute some acquisition phases in parallel, instead of the normal sequential process, which is in accordance with the new Defense acquisition process to develop and field weapon systems.

I will highlight several of our key technology efforts beginning with our collaboration with the Defense Advanced Research Projects Agency [DARPA], which allows us to aggressively pursue innovative designs for FCS. This effort will define and validate design and operational concepts using modeling and simulation; fabricate and test an FCS demonstrator; and develop those enabling technologies selected for use in FCS. Additionally, we will pursue development of armor that weighs less than current armor but still provides the same protection and survivability. We have projects that will develop smaller-caliber armaments and ammunition capable of precision direct and indirect fire at long ranges. We will capitalize on the hybrid electric drive for fast acceleration, silent operation, and increased fuel efficiency in our vehicles. We have intense efforts to use robotics in unmanned ground vehicles and unmanned aerial vehicles for remote sensing, communications relay, weapon carriers for line-of-sight and non-line-of-sight fires, and logistic support vehicles. The Army is aggressively developing the fundamental technology for robotics to enable these systems, both on its

Continued and early involvement of the acquisition community in long-term logistics sustainment issues results in buying replacement parts that modernize the system rather than just maintain it.

own and in collaboration with DARPA.

Q. The Army considers modeling and simulation important to innovation and cost savings. Can you share your vision for simulation in the Army?

A. We have to look at simulation technology as a major strategic capability for the United States. No other army has invested in this capability as much as we have. We did this for more than just saving money; the technology has saved lives and enabled the U.S. Army to be the best trained and best led fighting force in the world. Moreover, modeling and simulation are essential to transformation. These tools are a powerful way for our leadership to visualize the future and assess the needs of the objective force. I also believe we must exploit simulation in developing the weapon systems for the objective force. Simulation gives our program managers and contractors the ability to optimize these systems for the wide spectrum of operations that we can expect and are enumerated in the new Field Manual 1, *The Army*. First at bat is the Future Combat Systems, but we need to ensure that all systems in development are integrated into the objective force. Modeling and simulation will pro-

vide the underpinnings to accomplish this integration.

Q. What is your view on the role of robotics in the Army, and when might we see robotics fielded with our soldiers?

A. The Army has great interest in using unmanned systems to keep soldiers out of harm's way, free them from tedious and routine operations that can be performed by machines, and reduce the commander's logistics burden. In fact, we have used teleoperated, remotely controlled unmanned ground vehicles in Bosnia and Kosovo for mine clearing. We are also currently using imagery from unmanned aerial vehicles [UAVs], including the Army's Hunter UAV and the Air Force's Predator, for reconnaissance and surveillance in support of Kosovo operations. In the future, we see an expanding role for robotic systems as they become more autonomous and less dependent on direct human control, reducing the burden on our soldiers. The Army vision for the Future Combat Systems and the objective force incorporates unmanned systems as a key element for both ground and air operations. The Army is currently developing the fundamental technology to develop these systems, both on its own and in collaboration with the Defense Advanced Research Projects Agency.

The result of introducing these systems into the force will be an increasingly higher proportion of unmanned to manned systems. It is too soon to know how many of our systems will be unmanned, but it is safe to say that the number of robotic systems in the force will undoubtedly increase as the technology matures and the Army gains experience with them.